

# Economic Impacts from the Minnesota Zoo 2012

Final Report

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## **Executive Summary**

An estimate was made of the Minnesota Zoo's economic impacts to the 7-county Metro Area using proven input-output impact estimation techniques. Based on the fiscal year 2012 gate totals of 1,369,515 visitors who came to the Zoo, its annual operations and visitors spending in the area generated \$146.2 million in gross output, 1,738 jobs and \$79.1 million in value-added to the local Metro economy. Impacts stemming from Zoo construction projects spanning five years (2013-2017) included \$103.4 million in gross output and \$55.9 million in value-added. Local job impacts from construction beginning in 2013 include approximately 88 jobs, rising to a high of 315 jobs in 2017.

## **Introduction<sup>1</sup>**

Located in the southwest Metro community of Apple Valley, Minnesota (Dakota County), the Minnesota Zoo is considered one of the nation's top zoos. Currently caring for 546 species and home to more than 4,200 animals, the Zoo features exhibits such as a tropical rain forest, marine center, northern tundra, woodland forest and a family farm. Further, new Zoo renovations and additions like the Medtronic Minnesota Trail, Russia's Grizzly Coast and 3M Penguins of the African Coast continue to enhance the facility and visitor experience with a broadening array of opportunities. With nearly 1.4 million visitors annually in FY 2012 and even more investments in its exhibits and facilities planned in the years ahead, the Minnesota Zoo remains a vibrant and critical educational and recreational attraction for local residents of the 7-county Metropolitan area. From its Metro location and via its Zoomobile outreach program across the state, its reach serves visitors from outside of the local area in Minnesota and beyond.

As a premier attraction in the Metro Area, the Zoo can be viewed as an "economic engine." Open 363 days a year, it employs full and part-time workers, purchases a wealth of supplies and services to keep operating, and generates further economic activity as it attracts and provides an on-site experience for all its visiting consumers. This report summarizes an estimate of the nature and significance of this economic activity.

## **Background on Metro Area Tourism<sup>2</sup>**

According to estimates provided by the Minnesota travel office, Explore Minnesota, Metro travelers spend approximately \$6.2 billion annually, with two-thirds of that spending coming from visitors who stay in the area overnight in local hotels, motels and bed and breakfasts. Service to those travelers across the spectrum of travel and tourism businesses supports nearly 131,200 full-time equivalent jobs. Fifty-one percent of Metro travelers are in the area for pleasure, 13% for conventions or conferences and 20% for business purposes. Average travel

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<sup>1</sup> This study is the third update to an economic impact assessment, most last dated January 28, 2010, similarly detailing the effects from 2009 Minnesota Zoo visitors and annual operations on the seven county Metro Area. All descriptive information has been updated with the most current information available for FY 2012.

<sup>2</sup> Summarized from "The economic impact of expenditures by travelers on Minnesota's Metro Region and the profile of travelers June 2007 – May 2008," Davidson-Peterson Associates, Kennebunk, ME. 2008.

party size of Metro visitors is 2.6 with average length-of-stays of 3.5 nights (excluding day trippers).

Metro travelers come to consume from, or experience, a dazzling wealth of tourism opportunities in the Metro Area. These opportunities include a wide array of dining and nightlife entertainment choices and shopping that span the Mall of America to other regional malls and specialty arts & crafts. Further, travelers come to visit friends and family in high numbers, while taking in Valley Fair or other amusement or museum offerings, professional sports or participating in recreational activities on area lakes, trails, etc. The context in which tourism operates within the Metro Area is diverse and the Minnesota Zoo is a critically valuable player in the splendid array of choices.

## **Terms and Methods**

Regional economic impacts are typically described by three components: direct, indirect and induced impacts or effects. Direct impacts are the immediate, first-round expenditures generated as firms or organizations expand production to supply the increased demand of their operation's goods and services. Indirect impacts are the intermediate sales as businesses buy inputs for their productive use. An example of this would include a restaurant replenishing food supplies or hiring services (e.g. accountants). Finally, induced impacts come from increased household income and the resulting expenditures of employees spending earnings in the local economy.

Impact measures typically quantify the following:

- Gross Industry Output – the total value of industry production or receipts
- Employment – annual average full and part-time jobs
- Total Value-added – the dollar value added to the production of intermediate goods and services. It is the total of employee compensation plus self-employment income, plus other property income plus indirect business taxes.

For many industries, products sold or services rendered are from outside of the region being evaluated. Economic effects from sales to visitors of those goods do not accrue to the region's economy and must be deducted from the impact analysis. For retail sales, for example, only the margin of value above the wholesale price benefits, or is "captured" by, the business and region. Typically 60-70% of spending by tourists ends up as final demand within a local area. The model used here handles these considerations and the impacts reflect those adjustments.

For example, if a visitor were to spend \$50 on a Minnesota Zoo memento, part of what was spent went to the company that produced the item. Regardless of whether the item was made in California or Japan, the wholesale cost a retailer paid for that item ends up being subtracted from gross spending, as another economic region received the benefit and not the 7-county Metro Area (or Minnesota). This represents the notion of "leakage." What leaks from the economy is the value of the purchase that did not accrue to local businesses because the memento was not produced locally. In this example, only the retail margin of the item accrues

to the local area. If the item were assembled locally from foreign parts, only the value of the foreign parts would be considered leakage from the local economy.

Consequently, direct output or sales reported here only refer to the amount of money remaining in the area and available for re-spending on locally provided goods or services. The more that intermediate inputs to products and services are provided locally, the greater the direct sales levels (less leakage) and the greater the economic impact to the region to be re-spent locally. Further, the more extensive and complete a local area economic base is, the greater the likelihood that direct sales will result in greater local area spending.

Determination of the three components of impact, measured in gross output, employment and total value-added, was done with the help of the IMPLAN<sup>3</sup> model. IMPLAN is based on an input-output method of economic impact estimation that traces commodity flows from producers to intermediate and final consumers. Its level of detail is the county level and it is based on and conforms to the US Department of Commerce Bureau of Economic Analysis conventions for input-output analysis.

A model of the 7-county Metro economy in which the Minnesota Zoo operates was constructed with IMPLAN using the most recent 2010 IMPLAN data set for Minnesota. This included Anoka, Carver, Dakota, Hennepin, Ramsey, Scott and Washington Counties. This model was used to estimate the impact of the Zoo's annual visitors. A necessary consideration, in addition to estimating the proportions of visitors coming from the local area versus outstate or out-of-state, was the amount of daily spending each category of visitors would exhibit. For that, several spending profiles were used, derived from a number of secondary sources, as no on-site data collection from Zoo visitors was attempted.

## **Annual Economic Impacts**

Annual recurring impacts to the local economy from the Zoo come from the day-to-day operations of the facility and the economic activity generated by visitors coming to the facility, spending money on-site and in the surrounding Metro Area.

The Minnesota Zoo had 1,369,515 visitors in FY 2012. In order to estimate the impacts stemming from the economic activity generated in the local economy from these visitors, it is necessary to estimate the numbers and associated spending profiles of these visitors within the categories they fall into:

1. Annual visitors (Metro/non-Metro) on daytrips
2. Annual visitors from outside the Metro Area staying overnight

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<sup>3</sup> IMPLAN (IMpact Analysis for PLANning) was originally developed for the USDA Forest Service for land and resource management planning. It is a sophisticated, yet flexible tool that uses microcomputer software and database from federal and state data sources to allow for economic impact assessments and analyses. Refined later by the University of Minnesota, it is now managed and supported internationally by MIG, Inc., Hudson, WI.

The Zoo's *Summer 2012 General Audience Report* developed by Custom Intercept Solutions indicated that approximately 74% of visitors were from the Metro Area, 10% were from outstate Minnesota and 14% of visitors came from beyond the state's borders.<sup>4</sup> As this important statistic in the survey had a 2-percent non-response to the question of visitor origination, an assumption was made for this analysis to proportionately reallocate the non-response back into the three categories in order to account for all visitors. (Therefore, the values of 75.5% Metro, 10.2% non-Metro Minnesota and 14.3% non-Minnesota were used to account of visitor totals, summing to 100%.)

To determine daytrip vs. overnight visitors among the non-Metro visitors to the Zoo, the value from the *August 2008 Visitors Survey Report* from the Morey Group was used that indicated that 41% of non-Metro visitors stayed overnight in the Metro Area while on their trip, leaving 59% as daytrip visitors only (no lodging expenditures). These values allow us to break down or calculate the two key visitor-impact statistics for impact estimation:

Daytrip visitors = 1,231,947 (75.5% of 1,369,515 plus 59% of remaining 335,531 non-Metro)  
Overnight visitors = 137,568 (24.5% of 1,369,515 total gate multiplied by 41% overnight)

Visitor spending impacts result from daily activity, so the 137,568 overnight visitors needed to be expanded to consider spending through the duration of their stay. As discussed in the 2009 MN Zoo economic impact study:

"...the Morey Report indicates an average 2.1 nights spent away from home when averaged across the entire group, but there is no way to know how many went to a hotel/motel and how many stayed with friends or relatives. The Morey Report also indicates that those who stayed in a hotel/motel stayed an average of 1.5 nights and those staying with friends/relatives stayed longer, an average of 3.0 nights. For simplicity ... a conservative estimate was made [using] a factor of 1.5 ... to estimate the spending of visitors who remain in the area longer than one day.

"The consequence of this 'conservative' approach means that we are applying a lodging expenditure to all, even though we know that some people stayed with friends/family; this is an overestimation of lodging impacts. It is believed that this will be more than offset by the fact that, according to Morey, those staying with friends/family stayed an average of 3 nights in the area, though we are only accounting for 1.5 stays. It is most likely that total economic impacts from this group are being under-reported, mainly because we don't know enough about how this group actually splits between commercial stays and friends/family."

Applying the 1.5 factor (average nights spent in the area per person) to the 137,568 overnight visitors equates to 206,352 visitor-nights for non-Metro overnight visitors (137,568 visitors X 1.5 nights/visitor = 206,352 visitor nights).

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<sup>4</sup> Metro Area is defined here to be visitors traveling within fifty miles to the Zoo, which corresponds to the furthest reaches of the 7-county study area.

## 1. Annual Metro/Non-Metro Day Visitors

Table B-3 from the 2008 Davidson-Peterson report noted that daytrip visitors spent an average of \$46/person/day. The spending categories were determined by splitting this total among the expenditure categories shown in Table B-1 of that report from the column "Day Trippers." The results are shown in Table 1.

**Table 1.** Daily per-person spending profile for 1,231,947 daytrip visitors to the MN Zoo.

<b>Spending Category – Daily Visitor</b>	<b>Value (2008 \$)</b>
Transportation	\$5.25
Shopping	\$12.53
Eating & Drinking	\$11.78
Recreation	\$16.44
<b>TOTAL</b>	<b>\$46.00</b>

**Table 2.** Economic impacts from 1,231,947 annual daytrip visitors spending \$46/person/day.

<b>Impact Type</b>	<b>Gross Output (\$ millions)</b>	<b>Jobs</b>	<b>Value-added (\$ millions)</b>
<i>Direct</i>	\$38.4	801	\$19.4
<i>Indirect</i>	\$18.0	146	\$11.4
<i>Induced</i>	\$22.3	168	\$14.1
<b><i>TOTAL</i></b>	<b>\$78.7</b>	<b>1,115</b>	<b>\$44.9</b>

## 2. Annual Non-local Visitors Staying Overnight

As discussed, the total visitor-nights to be evaluated for spending impacts equals 206,352. Table B-3 from the Davidson-Peterson report indicates overnight visitor spending for visitors staying in commercial lodging (hotels/motels/B&B's) equaled \$150/person/day. That amount is broken down in the same fashion discussed above, based on the spending categories displayed in the Davidson-Peterson report Table B-1. The results are displayed below in Table 3.

**Table 3.** Daily per-person spending profile for 206,352 non-local visitors staying overnight.

<b>Spending Category</b>	<b>Value (2008 \$)</b>
Transportation	\$14.46
Shopping	\$36.28
Eating & Drinking	\$33.13
Recreation	\$30.96
Lodging	\$35.17
<b>TOTAL</b>	<b>\$150.00</b>

**Table 4.** Economic impacts from 206,352 annual non-local visitors staying overnight spending \$150/person/day.

<b>Impact Type</b>	<b>Gross Output (\$ millions)</b>	<b>Jobs</b>	<b>Value-added (\$ millions)</b>
<i>Direct</i>	\$15.6	310	\$8.1
<i>Indirect</i>	\$ 6.9	54	\$4.4
<i>Induced</i>	\$ 8.8	67	\$5.6
<b>TOTAL</b>	<b>\$31.3</b>	<b>430</b>	<b>\$18.1</b>

### 3. Operations

Current estimated annual cost of operations for the MN Zoo is \$22.5 million. The economic impact generated from annual operations to the Metro Area is displayed in Table 5.

**Table 5.** Economic impacts from annual operations of the MN Zoo.

<b>Impact Type</b>	<b>Gross Output (\$ millions)</b>	<b>Jobs</b>	<b>Value-added (\$ millions)</b>
<i>Direct</i>	\$15.4	53	\$3.6
<i>Indirect</i>	\$11.9	72	\$6.7
<i>Induced</i>	\$ 9.0	68	\$5.7
<b>TOTAL</b>	<b>\$36.2</b>	<b>193</b>	<b>\$16.1</b>

## One-time Economic Impacts from Construction

From its inception, the Minnesota Zoo was intended to be one of the world's great zoos. A new master plan has been released that charts out renovations and new exhibits in the coming decade that are intended to lead in the physical transformation "to fulfill that great promise."

Six projects were evaluated that are expected to be underway over the next five years (two commencing work in 2013), boosting economic growth in the Metro construction economy each year through 2017. The projects, expected to open the year following construction, include:

- New Crossroads Park-Phase 1/Adventure Play; Construction in 2013 (\$6.5 million)
- Renovated Snow Monkey Exhibit; Construction in 2014 (\$4.6 million)
- Existing Tropics Renovation; Construction in 2015 (\$5.1 million)
- New Asian Highlands - Phase 1; Construction in 2016 (\$11 million)
- Africa Savannah - Phase 1; Construction in 2017 (\$23.5 million)

The impacts are displayed in Table 6.

**Table 6.** Economic impacts from scheduled MN Zoo renovations and new construction.

<b>Project/Construction Year</b>	<b>Gross Output (\$ millions)</b>	<b>Jobs</b>	<b>Value-added (\$ millions)</b>
Crossroads Park-Phase 1 and Adventure Play/2013	\$13.3	88	\$7.2
Snow Monkey/2014	\$9.3	61	\$5.0
Tropics Renovation/2015	\$10.4	69	\$5.7
Asian Highlands/2016	\$22.4	147	\$12.1
Africa Savannah/2017	\$48.0	315	\$25.9
<b>TOTAL</b>	<b>\$103.4</b>	<b>*</b>	<b>\$55.9</b>

\* As the construction work is spread across five years, the annual job impacts are not as meaningfully considered and represented as a summed total. In isolation from other construction activity in the 7-county Metro Area, there is ebb and flow to the job impacts that jump significantly in 2017 due to the anticipated size of the construction investment related to the Africa Savannah project.

## Summary

Best available data and conservative assumptions were used to estimate the economic impacts from the Minnesota Zoo for the Twin Cities 7-county Metro Area for FY 2012. Economic impacts were detailed resulting from the annual Zoo operations and spending of visitors in the area, as well as those expected to be generated by Zoo construction projects that are planned to span across five years beginning in 2013.

Total economic impacts to the 7-county Metropolitan economy that occur on an annual basis from Zoo operations and visitors on daytrips and staying overnight in the area include:

- \$146.2 million in gross output,
- Approximately 1,738 jobs, and
- \$79.1 million in value-added.

The gross output impact of \$146.2 million is the sum of \$110 million associated with Zoo visitor spending in the area while on their day and overnight trips and \$36.2 million associated with annual operation of the facility and its effects in the local economy.

The new Minnesota Zoo Master Plan has laid out significant investments in upgrading existing exhibits as well as creating new ones. These capital investments stimulate significant economic activity in the local area, especially in the construction trades and allied industries. The economic impact on the Metro economy related to six projects spread across five years of construction activity is estimated to be \$103.4 million in gross output and \$55.9 million in value-added. Job impacts begin in 2013 supporting approximately 88 jobs, rising to a high of 315 jobs in 2017.

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